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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,817	03/22/2004	Georges M.K. Mathys	2001B007B	1479

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EXAMINER	
DANG, THUAN D	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/805,817	MATHYS ET AL.	
	Examiner	Art Unit	
	Thuan D. Dang	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 54-66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 54-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/22/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-6, 8-14, 54, 56-59, and 61-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grould et al (4,579,999) (hereinafter "G") in view of Asselineau et al (4,474,647) (hereinafter "A").

G discloses a process including a step of oxygenate conversion of dimethyl ether to olefins which are then selectively fed to a following oligomerization containing an acid catalyst such as ZSM-22, -23 (the abstract; figures; col. 2, lines 18-35; col. 3, lines 43-50).

G does not disclose removing oxygenates, namely DME, from the oligomerization olefin feed before the oligomerization (see the entire patent for details). However, A discloses that the presence of MDE causes trouble to the oligomerization (col. 1, lines 8-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the G process by removing the DME to an acceptable level such as less than 1000 ppm so that the oligomerization process can be operated.

The concentration of alkane and olefin in the feed must be selected to optimize the process.

As disclosed by A on column 1, lines 57-65, the ratio of the DME and water in the olefin must be controlled. Therefore, once the removal of DME and water is carried out by the A method of removing water to less than the acceptable level, It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the G process having been modified by A by rehydrating the olefin feed back to the acceptable level to optimize the oligomerization process.

Claims 2 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grould et al (4,579,999) (hereinafter "G") in view of Asselineau et al (4,474,647) (hereinafter "A") further in view of Glivicky et al (4,675,463) (hereinafter "Gl").

G discloses a process as discussed above.

G does not disclose using a PSA catalyst for the oligomerization of olefins. However, Gl discloses that PSA can be used for oligomerizing olefins (the abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the G process by using Gl catalyst for the oligomerizing of olefins since PSA is conventionally used for producing branched mono-olefins (column 2, lines 39-41).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grould et al (4,579,999) (hereinafter "G") in view of Asselineau et al (4,474,647) (hereinafter "A") further in view of Blain et al (5,026,933) (hereinafter "B").

G discloses a process as discussed above.

G does not disclose selectivating the zeolite cat (see the entire patent for details). However, B discloses using selectivated ZSM-23 for oligomerizing olefins (the abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the G process by using B's catalyst for oligomerization of olefins if substantially linear hydrocarbon product is desired.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-14 and 54-66 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-44 of copending Application No. 10/201,203. Although the conflicting claims are not identical, they are not patentably distinct from each other because the conflicting claims disclose a process substantially the same as the applicants' claimed process except the amount of the oxygenate in the olefin stream. However, the amounts of oxygenate are very close. it has been established by the patent law that if range of prior art and claimed range do not overlap, obviousness may still exist if the ranges are close enough that one would not expect a difference in properties. *In re Woodruff* 16 USPQ 2d 1934 (Fed. Cir. 1990); *Titanium Metals Corp. V. Banner* 227 USPQ 773 (Fed. Cir. 1985); *In re Allers* 105 USPQ 233 (CCPA 1955).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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